



May 14, 2013

Mr. Louis Hard
Hi-Tec Plastics, Inc.
11380 Smith Road
Aurora, Colorado 80010

RE: Limited Phase II Environmental Site Assessment
3555 Moline Street
Aurora, Colorado

Dear Mr. Hard:

The following Limited Phase II Environmental Site Assessment (ESA) report has been prepared by LT Environmental, Inc. (LTE) for Hi-Tec Plastics, Inc. (Hi-Tec). The Phase II ESA was conducted for the property located at 3555 Moline Street, Aurora, Colorado Site (Figure 1).

Background

The existing site building was constructed in 1972 by the then site owners, Samuel Sokoloff, et al, a Colorado Limited Partnership. From 1972 until 1999, the Site was occupied under lease agreement by the Dow Chemical Company USA – Magnesium Extrusion Fabrication Division (Dow). In July 1999, the Timminco Corporation (Timminco) purchased the business from Dow and continued to operate the magnesium extrusion plant. Timminco operated the Site until 2009. The property was purchased by Aurora Smith RD Ventures, LLC, C/O David Goodell in 2007 (the current site owner). The Site remained unoccupied from 2009 until 2011.

In 2011, the property was leased by Hi-Tec, who began a plastics recycling operation. Hi-Tec is considering purchasing the property. The purpose of this Phase II ESA was to better understand the release of polychlorinated biphenyls (PCBs), petroleum hydrocarbons, and metals that had been reported by other consultants near the western portion of the site building. It has been hypothesized by others that the release of PCBs, petroleum hydrocarbons, and metals may have been the result of release(s) from former on-site metal presses (i.e., the 500-ton and 1,800-ton presses) that used PCB-containing hydraulic oil for cooling purposes (Figure 2) and/or drum storage in the site building skimmer room.

In determining an appropriate scope of work, LTE reviewed the following documents (Attachment 1, on CD-ROM) provided to LTE by Hi-Tec for both the Site and the adjacent property to the north (11380 Smith Road):

- *Phase II Environmental Investigation, 11380 Smith Road, Aurora, Colorado*, URS Greiner Woodward Clyde International, Americas, January 1999, for Dow Chemical Company USA;



- *Limited Phase II Environmental Site Assessment*, Paragon Consulting Group, May 1999, for Nationwide Magazine (partial report);
- *Phase I Environmental Site Assessment, 10380 Smith Road, Aurora, Colorado*, Freedom Environmental, December 2006, for Ruby Stein Wagner & Associates (partial report);
- *Phase II Environmental Site Assessment, 11380 Smith Road, Aurora, Colorado*, Walsh Environmental Scientists and Engineers, LLC, August 31, 2009, for Timminco Limited (partial report);
- *Phase I Environmental Site Assessment, 10380 Smith Road, Aurora, Colorado*, Sundance Environmental Consultants, Inc.(SEC), October 12, 2009, for Aurora Smith Road Ventures, LLC;
- *Phase II Environmental Site Assessment, 10380 Smith Road, Aurora, Colorado*, SEC, June 21, 2010, for Aurora Smith Road Ventures, LLC;
- *Voluntary Clean-Up Program Application, 11380 Smith Road, Aurora, Colorado*, Strategic Environmental Management, LLC (SEM), August 31, 2010, for Aurora Smith Road Ventures, LLC (partial report); and
- *Subsurface Investigation (Draft)*, SEM, February 28, 2012, for Mr. David B. Goodell and Mr. Jim Gruber (President of Gruber Commercial Real Estate Services).

Figure 2 depicts the locations of the borings, groundwater monitoring wells, and concrete core samples obtained by other consultants that could be reconstructed by LTE.

On March 18 through 22, 2013, LTE conducted the Phase II ESA. LTE conducted the following tasks as part of the Phase II ESA:

- Drilled seven soil borings at the locations depicted on Figure 2 using a Geoprobe® rig. The borings were drilled to at least five feet below first encountered groundwater, or to bedrock, if encountered;
- Obtained soil samples continuously from the ground surface to the bottom of the borings, and field screened the soil encountered in the borings for total volatile organic vapors using a combination photo-ionization detector (PID) and flame-ionization detector (FID);
- Submitted one soil sample from each boring for laboratory analysis. The selected soil samples were tested for PCBs using Environmental Protection Agency (EPA) Method 608/8082, total petroleum hydrocarbons (TPH) as diesel range organics (TPH-DRO) and oil range organics (TPH-ORO) by EPA Method 8015 and the eight Resource Conservation Recovery Act (RCRA) metals using EPA Method EPA/SW-846;



- Converted each of the seven soil borings to temporary groundwater monitoring wells using 1-inch diameter polyvinyl chloride (PVC) screen and casing;
- Obtained a groundwater sample from each of the temporary monitoring wells installed by LTE and two monitoring wells installed by other consultants (monitoring wells SMW-01 and SMW-05 reportedly installed by SEM in January 2012). The groundwater samples were submitted for laboratory analysis for PCBs by EPA Method 608/8082, TPH-DRO and TPH-ORO by EPA Method 8015, and the RCRA metals using EPA Method EPA/SW-846;
- Determined the groundwater flow direction; and,
- Prepared this report.

Details regarding the specific tasks completed for the Phase II ESA are detailed below.

Phase II Environmental Site Assessment

Prior to conducting the Phase II ESA, LTE contacted the Underground Notification Center of Colorado (UNCC) and a private utility locator to clear buried utilities in the planned drilling locations. Underground utilities were not present in the vicinity of the proposed soil boring locations.

LTE prepared and implemented a site-specific updated Health and Safety Plan (HASP), dated March 2013. The HASP was kept at the Site during field activities. During the pre-job tailgate safety meeting, workers verified they understood the health and safety issues at the Site for the work being conducted by signing the HASP.

LTE filed the appropriate Notice of Intent (NOI) forms to the Office of the State Engineer's office prior to commencement of drilling. The Office of the State Engineer's office approved the NOI by issuing Monitoring Hole (MH) permit number 051347-MH on March 15, 2013. .

Soil Borings

LTE retained Drill Pro Services, Inc., of Denver, Colorado, to advance the seven soil borings for this Limited Phase II ESA. Drilling activities were conducted on March 18, 2013. The soil borings (BH01, BH02, BH03, BH04, BH05, BH06, and BH07) were installed using a Geoprobe® direct-push drilling rig. The Geoprobe® rig was equipped with standard 2-inch diameter, 5-foot long, continuous stainless steel samplers with clear plastic liners. By using the direct-push technology, no soil cuttings were generated.

Soil Sampling

The soil samples were retained in clear plastic bags for visual inspection of grain size distribution, color, notable staining and/or odor, moisture content, and other pertinent features.



In addition, the soil was field screened by a calibrated PID/FID for detecting total volatile organic vapors. The encountered soils were classified utilizing the Unified Soil Classification System (USCS) and documented on the soil boring log by an LTE field geologist. Soil boring log/monitoring well completion diagrams are included in Attachment 2.

One soil sample obtained from each boring was submitted for laboratory analysis. The soil sample selected for analysis was chosen based on elevated PID/FID values. In the absence of elevated PID/FID detections, the sample with unusual staining or odors, if any, was selected for analysis. In the absence of unusual staining or odors, the soil sample located at the soil/groundwater interface from each boring was selected for analysis.

Soil samples were submitted to Accutest Laboratories (Accutest) of Wheat Ridge, Colorado, for laboratory analysis.

Groundwater Monitoring Well Construction

Each soil boring was completed as a 1-inch diameter flush-mounted monitoring well. Monitoring well construction followed standard industry practice as detailed in both the American Society for Testing and Materials (ASTM) Standard D 5092 – *Standard Practice for Design and Installation of Groundwater Monitoring Wells in Aquifers* and the Colorado Office of the State Engineer Water Well Construction Rules 2CCR 402-2. Depth to groundwater was encountered between 13.84 and 16.55 feet below the top of casing (TOC).

On March 22, 2013, the elevation of the top of the inner PVC well casing was measured on the north side of the casing in each of the newly installed monitoring wells (BH01 through BH07) and the two existing monitoring wells (SMW-01 and SMW-05). The relative groundwater elevations and groundwater flow direction are depicted on Figure 3.

Groundwater Monitoring Well Development

Monitoring well development did not begin until the grout surrounding the well casing set for at least 24 hours. Prior to development, the volume of water in the well casing was determined from the inside casing diameter, the static depth to water, and the total depth of the monitoring well.

Monitoring wells were developed using disposable bailers. Where applicable, development continued until 10 well casing volumes had been purged from the monitoring well. A record of the well development procedures and data obtained was recorded on monitoring well development/purging forms and noted in the logbook.

Groundwater Monitoring Well Sampling

Purging of the monitoring wells prior to sampling was performed by removing three well casings of water to collect representative samples of the shallow groundwater horizon. Purging was accomplished by utilizing a 2-inch bailer. While purging the newly installed wells, LTE



inspected the groundwater for the presence or absence of obvious environmental impacts (i.e., sheen, odor, or free product). Copies of the Well Development/Purging Forms are included in Attachment 3.

Hand bailers were used for collecting groundwater samples. Groundwater samples from the bailer were transferred to clean, laboratory-provided sample containers and submitted to Accutest of Wheat Ridge, Colorado, for laboratory analysis.

Field Observations

Non-saturated soils encountered in the soil borings consisted of sand and clay to a depth of approximately 22 feet below ground surface (bgs). Saturated soil conditions were not identified at any of the soil borings drilled as part of the LTE Phase II ESA. Bedrock, consisting of a very hard claystone, was encountered at approximately 22 feet bgs in soil borings BH03, BH04, BH05, BH06, and BH07.

Elevated PID/FID readings and/or staining were observed in soil borings BH04, BH05, and BH06 at a depth of 16 feet to 17.5 feet bgs, 2 feet to 4 feet bgs and 2 feet to 5 feet bgs, and 16 feet to 17.5 feet bgs, respectively. Elevated PID/FID, staining or odors were not detected in soil borings BH01, BH02, BH03, and BH07.

Groundwater in the borings drilled by LTE was encountered at depths which ranged from 14 to 17.5 feet bgs. An approximately 1/16-inch thick layer of floating product and a strong odor (assumed to be a petroleum product) was identified in monitoring well BH06. No other indications of floating product or odors were detected in any of the other monitoring wells sampled by LTE.

Groundwater Flow Direction, March 2013

On March 22, 2013, LTE measured and recorded the static groundwater levels in the newly installed monitoring wells (BH01, BH02, BH03, BH04, BH05, BH06, and BH07) and the existing monitoring wells (SMW-01 and SMW-05). The static groundwater levels in the nine wells ranged between 13.84 feet below TOC in monitoring well BH07 to 16.55 feet below the TOC in monitoring well BH03 (Table 1). Based on the static groundwater levels obtained by LTE in March 2012, groundwater beneath the Site flows to the northwest (Figure 3).

Analytical Results

Soil

LTE compared the laboratory results for PCB and eight RCRA metal concentrations in soil to the EPA Regional Screening Levels (RSLs) for residential and industrial exposure (Table 1).

Currently, EPA has not published an RSL for TPH concentrations in soil. In addition, the Colorado Department of Public Health and Environment (CDPHE) has not established an



unequivocal remediation value for TPH in soil. Rather than determining a value, CDPHE has adopted the Colorado Department of Labor and Employment - Division of Oil and Public Safety (CDLE-OPS) investigatory threshold value of 500 milligrams per kilogram (mg/kg) for TPH in soil as the level at which impacted soil should be further investigated. LTE compared the detected concentrations of TPH in the soil samples to the CDLE-OPS investigatory threshold.

Review of the laboratory results indicated the following:

- Total PCBs were detected at concentrations exceeding the laboratory detection limit in four of the seven soil samples submitted for analysis. Of these four samples, two samples contained total PCBs at concentrations that exceeded the residential RSLs of 0.22 mg/kg. Sample BH05 2' - 5' contained total PCBs at a concentration of 762 mg/kg, which also exceeds the industrial EPA RSL of .74 mg/kg. Sample BH06 16' - 17.5' contained total PCBs at a concentration of 0.242 mg/kg;
- Of the eight RCRA metals, arsenic, cadmium, mercury, and silver were not detected in any of the soil samples at concentrations which exceeded the laboratory detection limits;
- Of the four remaining RCRA metals (i.e., barium, total chromium, lead, and selenium), only total chromium was detected at a concentration that potentially exceeded the residential EPA RSLs. Sample BH05 2' - 5' contained a concentration of 8.1 mg/kg total chromium;
- It is important to note that the total chromium concentration reported for soil sample BH05 2' - 5' was compared to the residential EPA RSL for both trivalent chromium (120,000 mg/kg) and hexavalent chromium (0.29 mg/kg), even though the laboratory reported the total chromium concentration; and
- TPH concentrations that exceeded the laboratory detection limits were detected in four of the seven soil samples submitted for analysis. TPH-DRO was detected in soil samples BH05 2' - 5' and BH06 16' - 17.5' at concentrations of 134 mg/kg and 938 mg/kg, respectively. TPH-ORO was detected in soil samples BH05 2' - 5' and BH06 16' - 17.5' at concentrations of 476 mg/kg and 3,730 mg/kg, respectively.

The laboratory reports are included in Attachment 4. The soil boring analytical data obtained by LTE and others are depicted on Figure 4. Only that data obtained by other consultants, for which LTE had access to, is included on Figure 4.

Groundwater

LTE compared the PCB and eight RCRA metal groundwater analytical results to the CDPHE Colorado Soil Evaluation Values (CSEVs) Water Standards (Table 2). Currently, there are no CDPHE Water Standards for TPH impacted groundwater.



When technically possible, the laboratory detection limits for total PCBs and metals in groundwater were below the CSEVs. However, in some instances the CSEVs are extremely low, and thus, for two groundwater samples and for three metals (arsenic, total chromium, and selenium), the ability of the analytical laboratory to obtain detection limits below the CSEVs was not possible (Table 2). These specific PCB and metals results are not discussed below, nor are they depicted on the figures.

The groundwater analytical results indicated the following:

- Total PCBs were detected at concentrations exceeding the CDPHE-CSEV Water Standard for PCBs (0.000017 milligrams per liter (mg/L)) in seven of the nine groundwater samples submitted for analysis. Total PCB concentrations detected ranged from 0.0010 mg/L to 0.0858 mg/L;
- Metals were not detected in any of the groundwater samples at concentrations that exceeded the CDPHE-CSEV Water Standards; and
- TPH as DRO, ORO, or both were detected at concentrations that exceeded the laboratory detection limits in all nine of the groundwater samples submitted for analysis. TPH as DRO was detected in seven of the nine groundwater samples at concentrations that ranged from 0.232 mg/L to 22 mg/L. TPH as ORO was detected in eight of the nine groundwater samples at concentrations that ranged from 0.206 mg/L to 87.3 mg/L.

The laboratory reports are included in Attachment 4. The groundwater data obtained by LTE and others are depicted on Figure 5. Only that data obtained by other consultants, for which LTE had access to, is included on Figure 5.

If you have any questions or require additional information, please contact LTE at 303-433-9788.

Sincerely,

LT ENVIRONMENTAL, INC.

A handwritten signature in blue ink that reads "Kelly L. Kenyon".

Kelly L. Kenyon
Project Environmental Scientist

A handwritten signature in blue ink that reads "Susan Borden".

Susan Borden
Senior Geologist

Figures
Tables
Attachments

FIGURES

TABLES

ATTACHMENT 1
PREVIOUSLY GENERATED REPORTS
(CD-ROM)



ATTACHMENT 2
SOIL BORING / MONITORING WELL CONSTRUCTION LOGS



ATTACHMENT 3
GROUNDWATER MONITORING WELL DEVELOPMENT FORMS



ATTACHMENT 4
LABORATORY REPORTS

